UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER PURSUANT TO RULE 13a-16 OR 15d-16 UNDER THE SECURITIES EXCHANGE ACT OF 1934

August 10, 2023

Commission File Number: 001-39363

IMMATICS N.V.

Paul-Ehrlich-Straße 15
72076 Tübingen, Federal Republic of Germany
(Address of principal executive office)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F:

Form 20-F ☒ Form 40-F ☐

INFORMATION CONTAINED IN THIS REPORT ON FORM 6-K

On August 10, 2023, Immatics N.V. (the "Company") announced the initiation of a Phase 1/2 clinical trial with its proprietary Bispecific T cell engaging receptor (TCER®) IMA402. IMA402 is the second product candidate in Immatics' TCER® pipeline of next-generation, half-life extended bispecific molecules to enter clinical development. It targets an HLA-A*02:01-presented peptide derived from PRAME, a clinically established cancer target frequently expressed in a large variety of solid tumors.

Primary objectives of the IMA402 Phase 1/2 trial are to determine the maximum tolerated dose (MTD) and/or the recommended doses for trial extensions, as well as to characterize safety and tolerability of IMA402. Secondary objectives are to evaluate anti-tumor activity and assess pharmacokinetics of IMA402. The Phase 1a dose escalation will be followed by a Phase 1b dose expansion, with the plan then to initiate a Phase 2 with indication-specific cohorts and/or combination therapies. Pharmacokinetics data will be assessed throughout the trial and might provide an early opportunity for adjustment of the treatment interval based on the half-life extended TCER® format. The trial is initially planned to be conducted at approximately 15 sites in Europe, with extension into the US at dose expansion stage. The Phase 1a is designed to enroll approximately 45 patients.

In connection with the initiation of the Phase 1/2 clinical trial, the Company issued a press release, a copy of which is attached hereto as Exhibit 99.1.

INCORPORATION BY REFERENCE

This Report on Form 6-K (other than Exhibit 99.1) shall be deemed to be incorporated by reference into the registration statements on Form F-3 (Registration Nos. 333-258351 and 333-240260) of Immatics N.V. and to be a part thereof from the date on which this report is filed, to the extent not superseded by documents or reports subsequently filed or furnished.

EXHIBIT INDEX

Exhibit No.	Description
99.1	Press release dated August 10, 2023

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: August 10, 2023

IMMATICS N.V.

By: /s/ Harpreet Singh
Name: Harpreet Singh
Title: Chief Executive Officer

Exhibit 99.1

PRESS RELEASE

Immatics Initiates Phase 1/2 Clinical Trial to Evaluate
PRAME TCR Bispecific IMA402 in Patients with Advanced Solid Tumors

- TCER® IMA402 is the first next-generation, half-life extended TCR Bispecific targeting PRAME to enter the clinic
- Patient enrollment for IMA402 Phase 1/2 trial underway
- The trial will evaluate safety, tolerability, and anti-tumor activity of IMA402 in patients with recurrent and/or refractory solid tumors
- First clinical data expected in 2024

Tuebingen, Germany and Houston, Texas, August 10, 2023 – Immatics N.V. (NASDAQ: IMTX, "Immatics"), a clinical-stage biopharmaceutical company active in the discovery and development of T cell-redirecting cancer immunotherapies, today announced the initiation of a Phase 1/2 clinical trial with its proprietary Bispecific T cell engaging receptor (TCER®) IMA402. IMA402 is the second product candidate in Immatics' TCER® pipeline of next-generation, half-life extended bispecific molecules to enter clinical development. It targets an HLA-A*02:01-presented peptide derived from PRAME, a clinically established cancer target frequently expressed in a large variety of solid tumors.

The Phase 1/2 clinical trial (NCT05958121) investigates TCER® IMA402 in HLA-A*02:01-positive patients with PRAME-expressing recurrent and/or refractory solid tumors. The dose escalation part of the study is designed as a basket trial in focus indications to accelerate signal finding. Initial focus indications are cutaneous and uveal melanoma, ovarian cancer, lung cancer, uterine cancer and synovial sarcoma, among others.

"The addition of IMA402 to our clinical pipeline is a truly exciting step and aligns with our strategic goal to harness the full potential of PRAME, one of the most promising cancer targets in solid tumors. With our half-life extended format, we believe IMA402 has the potential to be an attractive treatment option by enhancing efficacy, minimizing toxicities, and providing a favorable dosing regimen for cancer patients.," said Cedrik Britten, Chief Medical Officer at Immatics. "We are working with urgency to bring IMA402 to a broad patient population as quickly as possible and look forward to sharing first clinical data in 2024."

Primary objectives of the IMA402 Phase 1/2 trial are to determine the maximum tolerated dose (MTD) and/or the recommended doses for trial extensions, as well as to characterize safety and

tolerability of IMA402. Secondary objectives are to evaluate anti-tumor activity and assess pharmacokinetics of IMA402. The Phase 1a dose escalation will be followed by a Phase 1b dose expansion, with the plan then to initiate a Phase 2 with indication-specific cohorts and/or combination therapies. Immatics has implemented an adaptive design for the dose escalation with the goal to accelerate the clinical development timeline of IMA402. Pharmacokinetics data will be assessed throughout the trial and might provide an early opportunity for adjustment of the treatment interval based on the half-life extended TCER® format. The trial is initially planned to be conducted at approximately 15 sites in Europe, with extension into the US at dose expansion stage. The Phase 1a is designed to enroll approximately 45 patients.

The trial initiation is based on the comprehensive preclinical studies with IMA402 presented at the European Society for Medical Oncology (ESMO) Congress 2022.

TCER® IMA402 is the second Immatics clinical program targeting PRAME, with the first being ACTengine® IMA203, a TCR-T cell therapy that is currently in Phase 1b dose expansion – see recent data release. Both approaches, ACTengine® and TCER®, are distinct therapeutic modalities that we believe have the potential to provide innovative treatment options for a variety of cancer patient populations with different medical needs.

About IMA402

TCER® IMA402 is a drug candidate owned by Immatics. IMA402 is Immatics' second TCER® molecule from the bispecifics pipeline and is directed against an HLA-A*02-presented peptide derived from preferentially expressed antigen in melanoma (PRAME), a protein frequently expressed in a large variety of solid cancers, thereby supporting the program's potential to address a broad cancer patient population. Immatics' PRAME peptide is present at a high copy number per tumor cell and is homogenously and specifically expressed in tumor tissue. The peptide has been identified and characterized by Immatics' proprietary mass spectrometry-based target discovery platform, XPRESIDENT®. IMA402 is part of Immatics' strategy to leverage the full clinical potential of targeting PRAME, one of the most promising targets for TCR-based therapies.

About TCER®

Immatics' next-generation half-life extended TCER® molecules are antibody-like "off-the-shelf" biologics that leverage the body's immune system by redirecting and activating T cells towards cancer cells expressing a specific tumor target. The design of the TCER® molecules enables the activation of any T cell in the body to attack the tumor, regardless of the T cells' intrinsic specificity. Immatics proprietary biologics are engineered with two binding regions: a TCR domain and a T cell recruiter domain. The TCER® format is designed to maximize efficacy while minimizing

toxicities in patients. It contains a high-affinity TCR domain that is designed to bind specifically to the cancer target peptide on the cell surface presented by an HLA molecule. The antibody-derived, low-affinity T cell recruiter domain is directed against the TCR/CD3 complex and recruits a patient's T cells to the tumor to attack the cancer cells. With a low-affinity recruiter aiming for optimized biodistribution and enrichment of the molecule at the tumor site instead of the periphery, TCER® are engineered to reduce the occurrence of immune-related adverse events, such as cytokine release syndrome. In addition, the TCER® format consists of an Fc-part conferring half-life extension, stability, and manufacturability. TCER® are "off-the-shelf" biologics and thus immediately available for patient treatment. They can be distributed through standard pharmaceutical supply chains and provide the opportunity to reach a large patient population without the need for specialized medical centers.

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About Immatics

Immatics combines the discovery of true targets for cancer immunotherapies with the development of the right T cell receptors with the goal of enabling a robust and specific T cell response against these targets. This deep know-how is the foundation for our pipeline of Adoptive Cell Therapies and TCR Bispecifics as well as our partnerships with global leaders in the pharmaceutical industry. We are committed to delivering the power of T cells and to unlocking new avenues for patients in their fight against cancer.

Immatics intends to use its website www.immatics.com as a means of disclosing material non-public information. For regular updates you can also follow us on Twitter, Instagram and LinkedIn.

Forward-Looking Statements:

Certain statements in this press release may be considered forward-looking statements. Forward-looking statements generally relate to future events or Immatics' future financial or operating performance. For example, statements concerning the timing of product candidates and Immatics' focus on partnerships to advance its strategy are forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as "may", "should", "expect", "intend", "will", "estimate", "anticipate", "believe", "predict", "potential" or "continue", or the negatives of these terms or variations of them or similar terminology. Such forward-looking statements are subject to risks, uncertainties, and other factors which could cause actual results to differ materially from those expressed or implied by such forward looking statements. These forward-looking statements are based upon estimates and assumptions that, while considered reasonable by Immatics and its management, are inherently uncertain. New risks and uncertainties may emerge from time to time, and it is not possible to predict all risks and uncertainties. Factors that may cause actual results to differ materially from current

expectations include, but are not limited to, various factors beyond management's control including general economic conditions and other risks, uncertainties and factors set forth in filings with the SEC. Nothing in this press release should be regarded as a representation by any person that the forward-looking statements set forth herein will be achieved or that any of the contemplated results of such forward-looking statements will be achieved. You should not place undue reliance on forward-looking statements, which speak only as of the date they are made. Immatics undertakes no duty to update these forward-looking statements. All the scientific and clinical data presented within this press release are – by definition prior to completion of the clinical trial and a clinical study report – preliminary in nature and subject to further quality checks including customary source data verification.

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